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Can the Developed Countries Compete with China for Textile Exports? A Country-level Study in the EU market from 2000—2008

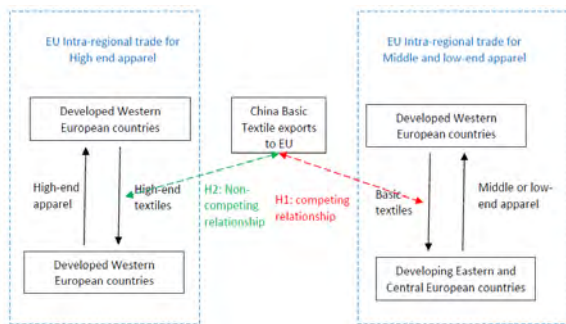
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Keywords: Textile, EU, China, Regional production network

Background: Although China is well-known as one of the world's most competitive apparel exporters, the competitiveness of China's textile exports compared with those from high-wage developed countries is less clearly understood. On one hand, China's market share in world textile exports has increased from only 10.4% in 2000 to 32.2% in 2011 (WTO, 2012). On the other hand, China's competitiveness in textile exports seems to be uncertain. For example, because textile manufacturing could be very capital-intensive in nature, China may not necessarily enjoy comparative advantage over more capital-abundant developed countries in making and exporting textiles (Dickerson, 1999). Restraint by its current stage of development, China also may not even have the capability of manufacturing some high-quality or high-tech textile products as the developed countries do (Chang & Ha-Brookshire, 2011).

To better understand the competitiveness of China's textile exports compared with those from the developed countries, this study intends to investigate whether China's textile exports to the EU constitute strong competing relationship with locally-made textiles. The EU is selected for analysis because: first, the EU is one of China's largest textile export markets (United Nation, 2013); Second, many Western EU countries remain world's leading textile producers and exporters (WTO, 2012); Third, intra-region trade accounts for a stable proportion in EU's total textile imports, implying the EU consumes textiles both locally made and made in China.

Theoretical framework: As illustrated in Figure 1, there exists a regional textile trade and production network (RPN) in the EU, featured by



the developed Western EU countries export basic textiles to the developing Eastern and Central European countries for middle and low-end apparel products and the developed Western EU countries trade high-tend textiles with each other for high-end apparel products (European Commission, 2012). Given China's limited capacity of making textiles both in quality and in variety at this stage, this study proposes that: *Hypothesis 1*: China's textile exports

to the EU constitute competing relationship with those EU-made basic textiles exported to the developing Eastern and Central European countries; *Hypothesis 2*: China's textile exports to the EU do not constitute competing relationship with those EU-made high-end textiles exported to the developed Western European Countries.

Methods and data: To test the hypothesis, the following empirical model was developed:

$$\ln(IntraEU_{it}) = \beta_{0i} + \beta_{1i} \ln(China_{it}) + \beta_{2i} \ln(China_{it}) \cdot Quota_t + \beta_{3i} \ln(Apparel_{it}) + \beta_{4i} T_t + \varepsilon_{it} \quad (1)$$

Where: $IntraEU_{it}$ refers to the annual textile import (NACE 17) by EU country i from other European countries in year t . $China_{it}$ refers to the annual textile import (NACE 17) by EU country i from China in year t . $Apparel_{it}$ refers to the annual output of apparel (NACE 18) by EU country i in year t . $IntraEU_{it}$, $China_{it}$ and $Apparel_{it}$ were measured in million Euros (Eurostat, 2013a; Eurostat, 2013b). $Quota_t$ is a dummy variable which equals 0 from 2000-2004 and equals 1 since 2005; T_t refers to the time trend. ε_{it} is the error term.

Equation 1 was evaluated at the country level which includes all 27 European Union members except Greece, Malta and Luxemburg whose data were not available. Data used in the estimation ranged from 2001, the year when China joined the World Trade Organization, to 2008, the latest year for available data. Because the data set involves both cross-sectional and time series data, the panel data modeling technique and the generalized least square method (GLS) were adopted to tackle the potential estimation problems such as serial correlation and cross-sectional heteroskedasticity.

Results: First, the results suggest that China's textile exports to the EU statistically only constitute significant competing relationship with those EU-made textiles exported to Czech Republic, Italy, Lithuanian and Slovakia, which are mostly Eastern or Central EU countries, i.e. Hypothesis 1 is supported. Second, no evidence suggest that China's textile export to the EU statistically constitute significant competing relationship with those EU-made textiles exported to any Western EU countries, i.e. Hypothesis 2 is supported. Third, the results suggest a statistically significant positive relationship between the output of apparel and the import demand for EU-made textiles in Belgium, Bulgaria, Denmark, Finland, Germany, Italy, Lithuania, Netherland, Slovakia, Slovenia, Spain and UK, confirming that the EU regional textile and apparel RPN remain strong, especially among the Western EU countries.

Implication and future research: Findings of this study have several important implications. First, the results suggest that despite its increasing market share globally, the competitiveness of China's textile export remain limited. Particularly, it seems that China hasn't reached the stage to compete in the high-end textile market with the developed countries. Second, the results suggest that the RPN may help the developed countries resist import competition from low-cost developing countries such as China. However, it also seems that such a RPN operates in a more stable way for the high-end market and less stable for the middle or low-end market. Future studies can use more disaggregated data at the detailed product level to further evaluate the relationship between China's textile exports to EU and the textiles locally made in EU. With the availability of more updated data, more sophisticated time series models can also be applied to improve the reliability of the study.

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